

REMARKS

Claim 2 has been rewritten in independent form.

Claim 5 has been amended to depend from claim 2.

Claim 1 has been canceled.

No new matter has been added and entry of the Amendment is respectfully requested.

Upon entry of the Amendment, claims 2-5 will be all the claims pending in the application.

I. Response to Rejection Under 35 U.S.C. § 102(e)

Claims 1-5 are rejected under 35 U.S.C. § 102(e) as being anticipated by Ueno et al. (US 2002/0022695).

Applicants respectfully submit that present claims 2-5 are novel and patentable over Ueno et al. for at least the following reasons.

Ueno et al. relates to a polymerizable unsaturated polyester resin composition comprising a straight-chain polyester (A) having a (meth)acryloyl group at both ends of molecules, which is obtained by reacting (a) a terephthalate oligomer having a hydroxyl group at both ends of molecules resulted from the alcoholysis reaction of collected waste polyethylene terephthalate by an aliphatic glycol having an ether bond, as a main component (claim 1). In Ueno et al., “a polymerizable unsaturated polyester resin composition” is a thermosetting polyester resin composition, though a thermoplastic polyester such as polyethylene terephthalate is used as a raw material.

Synthesis Example 1 of Ueno et al., which is relied upon by the Examiner, is summarized as follows:

Diethylene glycol and poly(ethylene terephthalate) were subjected to alcoholysis reaction using dibutyltin oxide as a catalyst to obtain a terephthalate oligomer having a hydroxyl group at both ends of molecules. Then, phthalic anhydride and GMA (glycidyl methacrylate) were reacted thereto to obtain a straight-chain polyester (A) having a (meth)acryloyl group at both ends of molecules, and further reacted therewith was an ethylenically unsaturated monomer (MMA (methyl methacrylate) (B)) so that the resin composition might be cured.

On the other hand, the present invention relates to a thermoplastic polyester resin composition comprising 0.1 to 50 parts by weight of a viscosity modifier for thermoplastic polyester resin, based on 100 parts by weight of a thermoplastic polyester resin, wherein said viscosity modifier for thermoplastic polyester resin consists essentially of (a) 30 to 95% by weight of a unit derived from an alkyl (meth)acrylate containing an epoxy group, (b) 5 to 70% by weight of a unit derived from another alkyl (meth)acrylate, and (c) 0 to 80% by weight of a unit derived from another vinyl monomer copolymerizable therewith and comprising at least one of aromatic vinyls and vinyl cyanides. The thermoplastic polyester resin composition of the present invention is melt-kneaded with heat, for example, to obtain an extrusion molded article.

The thermoplastic polyester resin composition of the present invention is completely different from the thermosetting polyester resin composition of Ueno et al. Therefore, Applicants respectfully submit that Ueno et al. does not disclose or teach the present invention.

Moreover, in general, a thermoplastic polyester resin composition and a thermosetting polyester resin composition are applied to different applications. In addition, methods for processing a thermoplastic polyester resin composition and a thermosetting polyester resin composition differ from each other. That is, the technical fields thereof are apparently different. Thus, Applicants respectfully submit that the present invention is not obvious over Ueno et al.

In addition, the Examiner considered that the number-average molecular weight of the straight-chain polyester (A) having (meth)acryloyl groups at both ends of molecules of Ueno et al. is preferably from 1500 to 3000, which is said to be within the presently claimed range. See page 3, second paragraph of the Office Action.

Applicants respectfully disagree. The weight average molecular weight of 1,000 to 400,000 described in the present claims is with respect to a viscosity modifier for thermoplastic polyester resin, which is different from the straight-chain polyester (A) of Ueno et al. Perhaps the Examiner has misapplied the term.

Furthermore, the process described in Synthesis Example 1 of Ueno et al. (summarized above) merely produced component (A) in the composition of Ueno et al. Methyl methacrylate (MMA) was added to the resultant as component (B) in the composition of Ueno et al. However, no polymerization, in particular, between glycidyl methacrylate, MMA and styrene, occurred during the process. That is, this process of Ueno et al. does not produce the viscosity modifier recited in present claim 1. The Examiner appears to misunderstand this portion of Ueno et al.

Still further, in Ueno et al., the polymerizable unsaturated polyester composition which contains a straight-chain polyester (A) having a (meth)acryloyl group at both ends of molecules

and an ethylenically unsaturated monomer (B) is cured (i.e., polymerized) in the presence of a polymerization initiator (Paragraph No. [0042]). However, the straight-chain polyester (A) does not contain an epoxy group. Thus, the polymerization also does not result in the presently claimed viscosity modifier.

Further, as noted above, the straight-chain polyester (A) of Ueno et al. is different from the viscosity modifier of the present invention. Also, the ethylenically unsaturated monomer (B) of Ueno et al. does not qualify as a thermoplastic polyester resin. Accordingly, the composition of Ueno et al. is different from the thermoplastic polyester composition of present claim 2. In this regard, Ueno et al. discloses that an air-drying unsaturated polyester (C) may be added in the composition, which is used only in a weight ratio (A):(C) of 90-50%:10-50% (Paragraph No. [0035]). Also, Ueno et al. describes that a thermoplastic resin may be added in the composition in an amount of 0 to 50 parts by weight based on 100 parts by weight of the resin composition (Paragraph No. [0039]).

In view of the foregoing, Applicants respectfully submit that the present claims are not anticipated or rendered obvious by Ueno et al. and thus the rejection should be withdrawn.

II. Conclusion

In view of the above, reconsideration and allowance of claims 2-5 are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.116
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Attorney Docket Q86665

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Fang Liu
Registration No. 51,283

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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